



Practice Masters Level B

8.1 Laws of Exponents: Multiplying Monomials

For Exercises 1–4, identify the base and the exponent.

1. 5^7 _____ 2. 6^6 _____ 3. 2^{12} _____ 4. 7^4 _____

Evaluate.

5. 10^9 _____ 6. 4^7 _____ 7. 12^4 _____ 8. 9^5 _____

Simplify each product. Leave the product in exponent form.

9. $9^5 \cdot 9^9$ _____ 10. $6^7 \cdot 6^7$ _____ 11. $10^6 \cdot 10^{12}$ _____ 12. $5^5 \cdot 5^{10}$ _____
 13. $4^7 \cdot 4^6$ _____ 14. $8^5 \cdot 8^7$ _____ 15. $10^{10} \cdot 10^{10}$ _____ 16. $12^4 \cdot 12^5$ _____
 17. $2^7 \cdot 2^4$ _____ 18. $3^8 \cdot 3^3$ _____ 19. $10^x \cdot 10^y$ _____ 20. $6^a \cdot 6^b$ _____

Simplify each product.

21. $(-x^6)(7x^3)$ _____ 22. $(9x^4)(-5x^6y^7)$ _____
 23. $(-10a^3b^5)(6a^4b^7)$ _____ 24. $(14x^3y^5)(-4x^7z^9)$ _____
 25. $(5r^4s^3)(-7r^5s^9)$ _____ 26. $(8a^4c^5)(9b^3c^8)$ _____
 27. $(-4w^4)(7w^6)(2x^8)$ _____ 28. $(3a^2)(4b^5)(-4a^2b^2)$ _____
 29. $(-9x^2)(3x^4)(-3x^2)$ _____ 30. $(4f^5)(-2e^3)(5e^4f^6)$ _____
 31. $(-2a^2)(-2b^4)(2b^3)$ _____ 32. $(-3x^5)(-5y^4)(-4x^4y^6)$ _____
 33. $(-7f^3g^6)(4h^2)(-5g^3)$ _____ 34. $(8b^2)(3b^4)(4a^5c^6)$ _____
 35. $(-3r^2)(-6t^8)(-4s^8)$ _____ 36. $(2x^6)(5y^7)(9x^3z^5)$ _____
 37. $(2a^7)(12a^3)(-c^9)$ _____ 38. $(5x^3z^2)(-8y^7)(4x^2y^2)$ _____

Use the formula $V = lwh$ to find the volume of each rectangular prism.

39. $l = 2x, w = 3y, h = 2z$ _____ 40. $l = x, w = 5x, h = 4y$ _____
 41. $l = 4ab, w = 2ac, h = 2bc$ _____ 42. $l = 6fgh, w = 2gh, h = 3fh$ _____
 43. $l = 3xyz, w = 3xy, h = 5xyz$ _____ 44. $l = 7ab, w = 6b, h = 2bc$ _____